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A MONTHLY JOURNAL OF

MEDICINE AND SURGERY.

EDITED BY

DAVID W. YANDELL, M. D.
Professor of Clinical Surgery in the University of Louisville,

AND

THEOPHILUS PARVIN, M. D.
Professor of the Medical and Surgical Diseases of Women in the University of Louisville

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THE AMERICAN PRACTITIONER.

AUGUST, 1871.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

THE LATE DR. JOHN CONOLLY, OF HANWELL, ENGLAND.

BY CHARLES A. LEE, M. D.,

Late Professor of Medical Jurisprudence in the University of the City of New York.

The late Dr. Conolly may well be regarded as one of the benefactors of his race. To him more than to any other individual England owes the establishment of non-restraint in the treatment of the insane; and although he was not the first to introduce it into Great Britain, yet he was the first to demonstrate its advantages on a large scale, to show its soothing influence upon the insane mind, its marked power in diminishing the violence of the paroxysms of mania, its tranquilizing effect on the entire inmates of an asylum, as well as its beneficial influence on the attendants; and yet his system of management, although it has doubtless modified the treatment of the insane throughout Europe, and to a considerable extent also in this country, has not done the amount of good that might have been expected; and more

than this, it has met with actual opposition in quarters where we should have supposed it would have been hailed with enthusiasm and delight.

Although Dr. Conolly never laid down the principle of non-restraint in the management of the insane as an absolute and inflexible law, yet he demonstrated, in an experience of nearly thirty years, the possibility of conducting an asylum successfully, containing from eight to twelve hundred patients, without the use of mechanical restraints of any kind. He did not dogmatize on the subject; he preferred to show his faith by his works; and if he never resorted to restraint it was because he believed that it was never necessary. While most other physicians who have charge of lunatic hospitals are very free to acknowledge that mechanical restraints should never be resorted to unless there be a clear necessity, it so happens that they find this necessity in great numbers of cases. It is so throughout Germany, France, and the greater part of Europe, as well as this country. Although some of the most eminent foreign physicians, as the late Professor Griesinger, of Germany, not only accepted non-restraint, but were its earnest and eloquent advocates, the system seems to make very slow progress even in those countries where its great benefits have been witnessed and are generally acknowledged, and considerations both of humanity and science recommend its adoption. Why is this? We believe the principal causes will be found connected with considerations of economy, time, and labor. To carry out the non-restraint system as it was carried out by Dr. Conolly at Hanwell would require at least double the number of attendants in proportion to the patients as are furnished in American asylums, with a greatly increased expense. Besides, it would impose more than twice as much care, watching, anxiety, and labor on the part of the superintendent and his assistants. If these can be saved, so much at least is supposed to be gained. Americans are too much accustomed to labor-saving

machinery to spare its employment whenever it economizes time, money, or labor. Whether animate or inanimate nature is concerned, it is all the same. And this is not merely a Yankee or American notion; it is the same to a great extent the world over.

While Dr. Kirkbride, of the Pennsylvania Asylum, and some others of our able superintendents, admit that every lunatic asylum may be well conducted without any mechanical restraint whatever, they would seem to doubt its expediency in all cases; and to carry out the plan fully they justly claim that the hospitals should be so constructed as to give all the benefits of the most perfect classification, with a full force of faithful and experienced physicians, and ample grounds for exercise and occupation in the open air. It is not too much to say that this is within the reach of nearly all our principal asylums at the present time, and might be of all by such modifications in plans of construction, and additions of separate buildings and land, as are entirely practicable. It is to be hoped that in all new asylums in our country the internal construction and arrangements, as well as opportunity for agricultural and mechanical employments, may be such as no longer to furnish an excuse for any other than what may truly be called the humane, scientific, and curative treatment of the patients.

If Dr. Conolly is to be commended, as he assuredly is, for his perseverance and success in carrying out the great reform of non-restraint, it is to be understood that by this is meant not one feature only, but a multitude of details. It implies, as fully stated by himself in his different writings, an appropriate building, or rather buildings, on a suitable site; ample surrounding space, not only for gardens, shade, and ornamental grounds, but also for agricultural employments, shops for labor in all the necessary mechanic arts, and places under cover for shelter and recreation; internal arrangements calculated to solace and divert the mind diseased, and occupy it in some

useful direction, as well as to provide for all the decencies and comforts of life; a sufficient number of well-qualified, well-paid attendants, animated by a spirit of self-denial, self-devotion, and kindness; and above all a superintendent penetrated, as it were, by a sincere love for the insane; possessing a humane disposition, a calm, vigorous, and determined mind; thoroughly imbued with the conviction that insane patients are best treated by kindness and humanity, without coercion or any display of means thereto.

Owing to the peculiar organization of his asylum, and the very limited amount of land attached to it, Dr. Conolly was never able to try the experiment of agricultural and farm labor on a large scale, as he desired, and as has been done successfully at Clermont and the newly-established asylums in France and Germany; but he believed fully in the principle of out-door labor as a substitute for mechanical restraint.

To show the extent to which non-restraint has been carried in Great Britain, and chiefly through the influence of Dr. Conolly, it may be stated that in the Essex County Asylum, established in 1853, containing five hundred and ninety-nine patients, restraint has been adopted in only a single instance, although two thousand five hundred and sixty-eight patients have been treated. In the Royal Asylum, Glasgow, with an average of over six hundred inmates, mechanical restraint has not been used for the last twenty years. In the Witts County Asylum, since 1851, with an average of over five hundred patients, mechanical restraint has not been employed, except in two or three surgical cases to retain bandages, and seclusion is rarely used. No mechanical restraint has been employed in the Lincoln Asylum since 1852, with an average of nearly six hundred patients, and seclusion for short periods only in ordinary bed-rooms is occasionally resorted to. In the Derby County Asylum mechanical restraint has only been resorted to in a single instance in the treatment of two thousand seven hundred and ninety-six lunatics. In

the North Wales Counties' Lunatic Asylum, with an average of nearly four hundred patients, mechanical restraint has never been resorted to, and seclusion only in a few extreme cases, active exercise in the open air being found a perfect substitute. In the Lancaster Asylum, with a number of patients ranging from seven to ten hundred, not a single patient has been put under mechanical restraint for twenty years; and the superintendent, Dr. Broadhurst, remarks that "during the whole of that period I have not seen a case in which I thought the use of it would have been beneficial."

The friends of Dr. Conolly—and he might claim all as friends who were ever acquainted with him—do not claim that he was the first to abandon mechanical restraints in the management of the insane in England, but concede the priority to Dr. Tuke, of York, and Drs. Charlesworth and Hill, of the Lincoln Asylum. But this reform was very little known, either to the medical profession or the public, until Dr. Conolly adopted it at Hanwell. This institution became so celebrated in a short time under his humane and enlightened management, and also through his able writings and annual reports, that it was visited by large numbers of physicians from this and other countries, and especially by the medical superintendents of foreign asylums; many of whom, from what they saw and heard, became the warm advocates of non-restraint in the cure of the insane. Even in *suicidal* cases, of which nine were admitted the second year, they saw all forms of bodily coercion abandoned, with the obvious effect of soothing and comforting the mind, and apparently reconciling them to life. Ample observation and experience have since proved that kind and mild treatment only tends to diminish the suicidal impulse, by soothing and calming the mind, removing the sense of degradation which restraints produce, while the patient meanwhile is surrounded with cheerful influences, and brought more completely under medical control. It is due, however, to truth to say—and my long

and intimate personal acquaintance with Dr. Conolly enables me to do so—that his eminent success in the management of the insane and his control over them were not solely owing to his banishment of all mechanical restraints, but partly to his supreme magnetic personal influence, conciliating and attaching all, whether insane or not, who came within the reach of his magic voice, his sympathizing look, and gentle manners. His face—if I may use the expression—was a constant "psalm of thanksgiving," beaming with intelligence, benignity, cheerfulness, and love. The insane seemed indeed to be magnetized whenever they came within the circle of his presence. A word or a look from him relieved them more successfully than any opiate. He had seen the apparent inefficacy of mechanical restraint as a means of curing the insane, or preventing accidents and mischief; its irritating effects on the violent; the alarm it occasions to the timid; and its tendency to debase those to whom and by whom it is applied, as well as to create incurable habits of uncleanliness; and he began the much-needed reform the very first day he entered on his duties as superintendent at Hanwell. He sincerely believed that no favorable impression could be made upon his patients so long as restraints were either resorted to or threatened; and this was not merely the result of observation, but of his knowledge of human nature and the workings of the human mind. But notwithstanding the fascinating personal endowments of Dr. Conolly, and his unequaled influence over the insane; and although he spent the greater part of his time, both night and day, in the wards of his asylum, believing that *moral treatment* of this class is by far the most successful treatment, and that this consists mainly in bringing the sane mind in contact with the insane, and not in being merely safe custodians; still he would not have succeeded so triumphantly as he did had he not, in the same proportion as he disused mechanical modes of restraint, substituted in their place a more efficient agency by surrounding himself with a greater

number of carefully-selected humane attendants, of superior intelligence and respectability. In this respect again following closely in the footsteps of Pinel, who in a few days released fifty-three maniacs from their chains, saying to them: "I am going to give you all liberty if you will only behave well; but I have plenty of strong men here ready to enforce my demands, if necessary, and bind you again if you do n't conduct yourselves quietly;" and he never found it necessary to bind a single patient.

Neither did Dr. Conolly find a substitute for physical and mechanical restraints in seclusion, in padded rooms or dark cells, as some of his opponents have asserted. Dr. Conolly was exceedingly gratified to find, after a short time, that not only was the management of a large asylum practicable without the application of bodily coercion, but that after the total disuse of such a method of control the whole character of an asylum undergoes a gradual and beneficial change; and not only this, but it soon became evident that the more rapid recovery of his curable cases was greatly promoted by the abolition of physical restraints. The great principles on which he so confidently relied for success were, as far as possible, to remove all causes of irritation and excitement from the irritable; to soothe, encourage, and comfort the depressed; to repress the violent by methods which leave no ill effect on the temper and no painful recollections in the memory; and in all cases to seize every opportunity of promoting a restoration of the healthy exercise of the understanding and the affections. Dr. Conolly testifies that where mania was thus treated, and not exasperated by severity and restraint, it lost its ordinary character of raving madness; loud cries, piercing shrieks, and agonizing groans were no longer heard; hope took the place of fear; quiet was substituted for discontent and violent struggles, and the mind left in a state favorable to every impression likely to call forth salutary effects. That mental diseases are essentially modified

and rendered more amenable to successful treatment by such a system of management was abundantly demonstrated in the experience of Dr. Conolly.

At the end of ten years of active asylum life, Dr. Conolly states in his annual report that during that whole period "no hand or foot has been fastened in this large asylum, by day or by night, for the control of the violent or the despairing; no instrument of mechanical restraint has been employed or even admitted into the wards for any reason whatever; no patient has been placed in a coercion chair by day or fastened to a bedstead at night. Every patient, however excited or apparently unmanageable, arriving at the asylum in restraints has been immediately set free, and remained so from that time. I wish to overstate nothing, but I am justified in adding that the results, more and more seen in every successive year, have been increased tranquillity, diminished danger, and so salutary an influence over the recent and newly admitted and most violent cases as to make the spectacle of the more terrible forms of mania and melancholia a rare exception to the general order and cheerfulness of the establishment."

After a faithful service of ten years, Dr. Conolly resigned, and was appointed visiting physician to the institution; visiting the asylum twice a week, and spending the greater portion of the day with the patients at each visit; retaining the same interest in the patients that he ever manifested; and having a kind and gentle word and pleasant look for each, caused their sad faces to gleam with a smile, while it roused their feeble minds, and made his visit to the wards longed for and appreciated. No philanthropist ever rejoiced in more acts of beneficence than Dr. Conolly. To do good to his fellow-men seemed the great aim of his life, and to be poor and insane were conditions which at once endeared the sufferers to him. Nor did he forsake them when discharged cured, but strove to obtain some pecuniary aid for them from a fund contributed for the relief of discharged patients, to which he generally

added a liberal donation from his own purse. He was an enthusiast in the cause of the insane, a model for the imitation of others similarly situated; practicing a ceasless vigilance over his patients; visiting the wards at all hours of the night to see that the night-attendants performed their duty, while in various ways he ministered to the comfort of the restless, sleepless patients under his care. His work was indeed literally a labor of love; and a common remark of his to his friends was, "I feel grateful to God, who has intrusted duties to me which angels might stoop to perform." Dr. Conolly would seem to have been raised up by Providence to do a special work much needed at the time. This was to rescue the insane from the wretched condition in which they generally were placed, and educate the public and professional mind in regard to the non-necessity of mechanical restraints in their management, and to show that a good and suitable building and pleasant site were *essentials* in the restoration of a disordered mind. A visit to England in 1862 showed me some of the valuable fruits of his teachings, for I found almost every county provided with a splendid lunatic hospital formed on the general principles advocated by him, and often crowning some beautiful hill, commanding an extensive and splendid prospect. And not only England, but also our own country is equally indebted to him, for most of our newly-erected lunatic hospitals have been erected according to plans described in his work on *The Construction of Lunatic Hospitals.*

It is not my design to attempt anything like a complete sketch of the life or the services of Dr. Conolly. I only aim to give some brief notices which may interest the reader and perhaps serve some useful purpose at home.

In regard to the absolute need of didactic and clinical teaching of insanity and nervous diseases generally in medical schools and lunatic asylums, Dr. Conolly was always a strong advocate. He held, indeed, that every public lunatic asylum

should be available for such practical instruction; and, as "some compensation for the unavoidable evils of public asylums," he thought every establishment of that kind should be made a clinical school, in which, under certain restrictions, medical students might prepare themselves for their future duties to the insane. Although insanity has not yet found a place among the *required* branches of medical education either in Europe or in this country, we trust the time is not far distant when this can no longer be said. Dr. Conolly set the example in Great Britain by instituting a course of clinical lectures in Hanwell Asylum, devoting one day in a week to them during the summer; the Doctor and the other medical officers of the asylum conducting the advanced students and young physicians attending through the wards, making them acquainted with the character and phases of insanity as exhibited in the different patients. The senate of the University of London now recognizes three months' attendance with clinical instruction in a lunatic asylum as equivalent to the same period of attendance in a medical hospital; and it has also recognized Bethlehem and Saint Luke's Hospitals as medical schools for the practical study of insanity. The lunatic asylums of Edinburgh, Glasgow, and Aberdeen also admit medical students to their wards for practical instruction; and lectures on medical psychology and clinical instruction on mental diseases have been given for ten years past, during the summer months, by Prof. Daylock, of the University of Edinburgh. But these lectures, as I personally know, are very thinly attended, and, I believe, will continue to be till insanity is made a subject of examination for a medical degree.

When I last visited Dr. Conolly at the Lawn House (Hanwell), in July, 1862, which he finally left in December, 1865, it was very evident that he had failed much in mental energy, and was suffering seriously from chronic disease. His brain had been greatly overworked, and the constant strain of his

mental powers for many years had wrought its work upon a constitution never very rugged. He complained of severe headaches and neuralgic pains of the face and head (of which he had a severe paroxysm at the dinner-table), as well as a chronic skin affection, which deprived him of sleep and rest, and gave him much annoyance by day; still he took a deep and active interest in everything relating to his profession, especially the insane. He was calm, cheerful, and affable; quiet and gentle in his deportment, and eminently gracious toward all. He considered, he said, the great work of his life accomplished, and was content to live or die, as it might please the Giver of life, but lamenting that he had accomplished so little of what he had designed to do. He had resigned his office of visiting physician to the asylum in 1852, ten years previous; and although he had been appointed consulting physician, there were scarcely any duties attached to the office. He took, I believe, a few private patients affected with nervous disorders, not insane, into his house, but altogether distinct from his family, and continued to do so for a few years afterward. He has expressed his feelings so fully at this time in his last work on *The Treatment of the Insane,* that I shall venture to quote a few passages.

"No longer residing in the Hanwell Asylum, and no longer superintending it, or even visiting it, I continue to live within view of the building and its familiar trees and grounds. The sound of the bell that announces the hour of the patients' dinner still gives me pleasure, because I know that it summons the poorest creature there to a comfortable, well-prepared, and sufficient meal; and the tone of the chapel-bell, coming across the narrow valley of the Brent, still reminds me, morning and evening, of the well-remembered and mingled congregation of the afflicted; and who are then assembling, humble, yet hopeful and not forgotten, and not *spiritually deserted.*"

Dr. Conolly continued to grow more feeble, till he was finally attacked with apoplexy and paralysis, March 5, 1867,

which in a few hours proved fatal. According to Sir James Clark, who was one of his life-long and most intimate friends, and who has written an excellent memoir of his life, to which I am much indebted in preparing this hasty sketch, Dr. Conolly "exhibited during the whole period of his retirement a tranquil, contented, and happy state of mind, and doubtless enjoyed the consolation of feeling that his life had been one of active benevolence, and that his labors had contributed largely to the permanent alleviation of human suffering in the most 'calamitous of all diseases.'"

PEEKSKILL, N. Y.

VAGINISMUS.

BY THEOPHILUS PARVIN, M. D.

Spasmodic contraction of the vaginal sphincter is a disorder which has not until quite recently found a place in any of our text-books on diseases of women. As there were heroes before Agamemnon, so there were surgeons before our talented and famous countryman, Dr. Sims, presented his paper to the London Obstetrical Society, giving the name, the pathology, and the therapeutics of the affection—surgeons who had previously traversed the same territory and arrived at the same ends.

Probably the first announcement made in regard to this disorder was by Dupuytren, in a clinical lecture* upon *fissure of the anus*, and was in these words: "This fissure, with consequent spasm, has not until the present been observed,

* The volume in which this lecture is found was published in 1839; but the lecture was delivered some time before, as the author died in 1835. Upon referring to the Lancet, February 16, 1833, Dupuytren's lecture will be found much abridged, and containing no allusion to spasmodic contraction of the vagina.

except at the anus. M. Pinel Grandchamp has seen a similar case involving the vulva. The contraction had become so great that sexual intercourse was impossible. Convinced that the malady was analogous to fissure of the anus, M. Grandchamp made a deep incision, dividing for two inches the fourchette, the mucous membrane, and the constrictor of the vulva. The contraction closed, and the cure was complete."

Huguier, in his inaugural thesis, August, 1834, described the disease and its treatment.

Finally, without widening this retrospect,* vaginismus, as now termed, was made the subject of several communications in the *Bulletin Général de Thérapeutique Médicale et Chirurgicale* in the summer and autumn of 1861, while Dr. Sims's paper was presented to the Obstetrical Society in November of that year, the first of his cases having occurred in 1857. Michon, writing in August, 1861, narrates numerous cases, the first of which he was called to in 1847 by Chomel, who recognized the nature of the malady, and foresaw the surgical operation advisable for its relief. Nevertheless to Dr. Sims belongs the honor of having, independently and entirely without knowledge of what others had done, worked out the problem of the disease and its therapeutics.

Some remarks made by Debout upon the etiology of this affection are so just that no apology need be offered for briefly presenting them. It is a general law of pathology that when the mucous membrane covering a muscular layer becomes the seat of a prolonged and severe inflammation, the muscular fibers are thrown into spasmodic contraction. If the inflammation persists, permanent contraction may ensue—*e. g.*, as in the esophagus and urethra. When the muscular plane is a sphincter, as at the anus, the vulva, the eyelids, it

* Professor Borelli, of Turin, published in 1851 a case of *spasm of the vulva*. After reciting the symptoms and treatment, he concludes that the affection was spasmodic rather than inflammatory, and of the same character as spasm of the anus; and that forced dilatation ought to succeed as well in this vulval as in anal spasm.

often suffices that the mucous membrane may be the seat of any lesion which exalts its normal sensibility, as a hyperæsthesia, a fissure, etc. The manifestations of this law, notwithstanding their multiplicity and frequence, escaped the sagacity of observers until the illustrious Boyer pointed it out in his chapter upon fissure of the anus, as existing in reference to disease of the mucous membrane, causing muscular spasm of the sphincter; and to him too belongs the honor of having pointed out, if not the best, the most powerful means of treatment—viz., incision of the contracted sphincter.

I shall now in a few words present three cases that occurred to me within the last twelve months.

Mrs. ——, fifty years of age, married, and the mother of a child some fifteen years of age, consulted me for a sensitive tumor at the mouth of the urethra, which had existed for a number of years. In this case vaginismus had gradually occurred, consequent upon the tumor, until sexual intercourse had become more and more painful, and finally was discontinued five years before I saw the patient. The vaginal orifice was so sensitive and so contracted that the introduction of the index finger was exceedingly painful and well-nigh impossible; and yet this lady was heroic and patient, and could endure pain and suffering quite as well as most of her sex. She was content with the removal of the urethral tumor, declining an operation to restore marital rights.

The second case occurred in a recently-married lady for five months a wife, during which repeated attempts at intercourse were fruitlessly made. The lady was young, the picture of health, well-formed, and well-nourished, with no excessive development of the nervous system. Her general health was excellent, and there was no disease of the sexual organs, of the rectum, or of the bladder to explain the vaginal spasm. It depended purely upon a local hyperæsthesia. In this case the treatment pursued was forced, then progressive

dilatation. The dilators used were the glass instruments of Dr. Sims. Before introducing one, which was done daily, it was smeared with an ointment of simple cerate and atropia. The instrument was retained from twenty to thirty minutes. In two weeks complete cure.

The third case occurred in a lady who had been married some years, but was childless from chronic endometritis. Consequent upon this endometritis there was more or less copious and constant purulent discharge from the uterus, producing great vaginal and vulval irritation and some erosions, with now and then actual vaginitis. For many months sexual intercourse had not been attempted. Here the vaginismus at times was so great that even the bulbous extremity of a self-injecting apparatus could not be introduced, and at any time the introduction of a cylindrical speculum of smallest size was exceedingly painful and difficult. The caliber of the vagina throughout seemed to be lessened; and such a condition is readily explicable by supposing an extension of inflammation to the connective tissue, with consequent hypertrophy and contraction.

Debout, in discussing this disorder, adopts as one of his conclusions that it is most rational to commence by treating the lesion, if still existing, which has produced it, and when this lesion is cured resort to dilatation. But it is manifest that such a practice would be utterly inapplicable in such a case as just narrated; for how reach the disease of the uterus when the very entrance of the avenue thereto was closed?

So too dilatation was out of the question; for the vaginal spasm and the vaginal contraction, with the irritable and sensitive condition of the entire vaginal surface, would render the process exceedingly slow and painful, possibly even prevent its success. There remained therefore only operation by cutting, and this was done, and the subsequent treatment pursued as directed by Dr. Sims. (Obstetrical Transactions, vol. iii, page 364.) "Place the patient (fully chloroformed)

as for lithotomy—on the back; pass the index and middle fingers of the left hand into the vagina; separate them laterally, so as to dilate the vagina as widely as possible, putting the fourchette on the stretch; then with a common scalpel make a deep cut through the vaginal tissue on the right of the mesial line, bringing it from above downward, and terminating at the raphé of the perineum. This cut forms one side of a Y. Then pass the knife again into the vagina, still dilating with the fingers as before, and cut in like manner on the opposite side from above downward, uniting the two incisions at or near the raphé, and prolonging them quite to the perineal integument. Each cut will be about two inches long—*i. e.*, half an inch or more above the edge of the sphincter, half an inch through its fibers, and an inch from its lower edge to the perineal raphé. Of course this will vary in different subjects, according to the development of tissue in each. To perfect the cure it is necessary for the patient to wear for a time a properly-adapted bougie or dilator."

Dr. Sims does not introduce the dilator, unless there is much hemorrhage, until twenty-four hours after. It is worn two or three hours each morning and each afternoon. The cure is generally accomplished in two or three weeks.

The operation was successful; but the tendency to recurrence of the disorder was so great that the dilators had to be used daily for a much longer period than two or three weeks.

Here it may be well to refer to one of the dangers that may be met with in this operation—for Dr. Sims tells us that "in two instances the bleeding was excessive"—and to some of the different methods of operating that have been advised. And first of the latter. Huguier, operating in 1831 upon his first case, used a probe-pointed bistoury, introduced an inch and a half within the vagina, cutting within outward on one side, and then on the other, "dividing the opening of the vagina on either side to the extent of seven or eight lines." Considerable hemorrhage occurred in this case.

Michon, in cases where the hymen still remained, made with a probe-pointed bistoury three incisions, one medium and two lateral, through this structure, and extending to the sphincter, but not involving it. In other cases double subcutaneous myotomy is made two centimeters distant on each side from the raphé, each division of the muscle being made from without toward the vagina, the extent and direction of the section regulated by the index finger of the left hand placed in the vagina.

Dr. Emmet's operation is done by passing the left index finger into the vagina, "elevating upon it the sphincter, which feels like a cord rolling upon it," then dividing with a pair of scissors the muscle upon each side of the perineal junction.

Burns's operation was division of the pudic nerve. Simpson's modification consisted in making this division subcutaneously. Dr. Savage believes a not uncommon form of vaginismus is due to the perineal body not having its usual elastic character, and is readily cured by "a median perpendicular incision three parts through it."

The instances where dangerous and even fatal hemorrhage has occurred from wounds of the lower portion of the vagina are not very numerous, but are explicable when we remember how freely the perineal and pelvic venous systems communicate, the absence of valves and the abundant supply of blood, and the existence of erectile plexuses. Occupying nearly three fourths of either side of the vagina at its entrance is the *bulb* of the vagina, "an oblong body, about an inch and a half long, and nearly half an inch thick at the broader or lower end." Immediately below this is the vulvo-vaginal gland, whose excretory duct usually opens at the junction of the inferior fourth with the superior three fourths of the vaginal orifice, just outside of the hymen or of the lateral *carunculæ myrtiformes*, external to them and internal to the nymphæ. This opening may sometimes be recognized by its reddish border. Of course the nearer any deep incisions,

made for the relief of vaginismus, approach the raphé the less risk of hemorrhage; and on no account should they be made so far upward—the patient supposed to be lying on her back—as to run the risk of involving the bulb, or even the vulvo-vaginal gland. My own preference is, where a cutting operation is necessary, for comparatively superficial incisions, and then immediately forced dilatation with the index and medius of each hand, stretching apart the vaginal orifice.

Undoubtedly the majority of cases of vaginismus can be cured without resorting to the knife. The removal of the cause is frequently sufficient in recent cases. The application of local sedatives may answer in others. Still others may be cured by dilatation, either *gradual*, as with glass bougies or gum-elastic bags distended with air or water, or *abrupt*, as performed in a manner similar to that originally proposed by Récamier for spasmodic contraction of the sphincter ani.

INDIANAPOLIS, IND.

THE ENDOSCOPE IN GRANULAR URETHRITIS IN THE MALE.

BY ROBERT NEWMAN, M. D.

The object of the present paper is to call attention to the value of the endoscope in one of the diseases for which it was devised.

The instrument which I have used, and which I regard as superior to any other yet offered to the profession, is that known as Desormeaux's, with the lamp invented by Dr. Cruise, of Dublin. Repeated use of this endoscope has led me to make certain modifications in some of its parts, and to add to it one or two things which I believe both widen the

range of the application of the instrument and add materially to its efficiency. The modifications, etc., to which I allude may be described as follows:

1. The graduation of the tubes in spaces of an eighth of an inch, which allows of more accurate observation at the time, and saves trouble to the operator and pain to the patient in searching for the diseased points in subsequent examinations.

2. A similar scale for the wires, whereby the surgeon is enabled to tell the exact moment when the mucous membrane is reached.

3. A straight tube for examining the bladder of the female, its far end closed with a glass fenestrum, which prevents the entrance of water into the tube.

4. A curved tube, closed, provided with a glass fenestrum at the curve, for the bladder in the male. The corresponding instrument in Desormeaux's set has, as is known, a sharp angle or corner, which oftentimes gives considerable pain to the patient when being introduced into the urethra.

5. Several holders, with sponges attached, to cleanse the parts through the tubes.

6. Several small silver cylinders, which fit into a handle. These, when tipped with nitrate of silver previously melted, are used instead of the solid stick of caustic.

7. Several small glass brushes, with which the solutions used are applied.*

With these few prefatory remarks I proceed to the consideration of the main subject of this communication: *Granular Urethritis.* This affection in the male is so common that

* I am now engaged in the endeavor to substitute, if possible, the light of the ordinary gas for the unsatisfactory and unwieldy Cruise lamp. I have also had made of glass several short tubes, of different sizes and forms, with an opening either in the side or end. These are designed particularly for the exploration of the female urethra. The light is reflected by the forehead mirror, such as is used in laryngoscopy. These tubes afford a most convenient means of applying atomized fluids to the parts. The best atomizers with which I am acquainted, as well as the tubes, are made by W. A. Demuth, artist in glass, 116 North Williams Street, New York.

almost every practitioner is called upon to treat it; yet in order that the subject may be presented as I myself have studied it, in connection with the endoscope, I ask the indulgence of the reader while I present a few general considerations concerning it.

Etiology. The origin of the affection is almost always in a neglected or protracted gonorrhea, or repeated attacks of this disease. Granular urethritis may, however, originate from any external or accidental cause whereby injury is inflicted upon the mucous membrane of the urethra.

Clinical History. Patients with granular urethritis usually tell the same story. They have a slight discharge, at times scarcely perceptible; occasionally but "a single drop," seen only in the morning on rising. In color the discharge is usually grayish, flecked here and there in certain cases with yellow. The granulations often bleed from slight causes, and hemorrhages from the urethra therefore are not infrequent. There may be a slight sense of burning or actual pain either during or immediately after micturition. There is often a certain itching or uneasiness in the glans penis and at the meatus. Relapses are exceedingly common, and may arise from almost innumerable causes. Indulgence in *Baccho et Venere*, exposure to cold, violent exercise, fatigue, overdistension of the bladder, violent emotions, etc., are among the most fruitful sources of a return of the affection. The discharge often continues for an almost indefinite length of time—for years, for life. Its subjects frequently suffer terribly from hypochondriasis, fancy themselves impotent, avoid the society of females, and sometimes meditate suicide.

Pathological Characters. The appearance of the mucous membrane of the urethra has been aptly compared to that observed in granular lids. Its follicles are enlarged; the membrane itself is hypertrophied, indurated; the urethral canal is narrowed, sometimes to such degree as to constitute stricture, so called. This condition must not, however, be

confounded with regular organic stricture, since it is a mere diminution in the size of the canal, due solely to the presence of the granulations. In some cases the submucous tissues themselves participate in the inflammation, and become hypertrophied and indurated. The endoscopic appearances of the granulations are briefly as follows: the longitudinal fibers of the urethra, radiating to the periphery from little centers resembling a contracted pupil, are less regular and distinct than in health, and are sometimes observed to be even interrupted. The membrane is of a darker hue, though it is often florid, purple, or excessively red, sprinkled with occasional yellow spots. These changes in color are accompanied by a peculiar luster, while the granulations, when numerous, give the whole a strawberry appearance. This description will be better recognized by referring to the accompanying diagrams, drawn from nature by my friend, Dr. O. Ficht, of this city.

Diagnosis. This may often be arrived at by a consideration of the history and symptoms of the case; but is determined at once and with certainty by ocular inspection—by the endoscope. Valuable evidence is furnished by the following: when the tube of the endoscope is being withdrawn from a urethra which is sensibly indurated, and especially if there be a slight stricture, the canal closes behind the end of the instrument with a certain abruptness, a circumstance which is in striking contrast with the gradual way in which the healthy urethra closes when similarly manipulated.

Prognosis. Granular urethritis may be as easily and as certainly cured as granular lids. The time required to accomplish this will vary from six weeks to four months, according to the severity of the case. Slight relapses are liable to occur, and patients should therefore be kept well under observation. It may also happen that after the granulations are cured the gleet will still remain. In such cases it will sometimes be necessary to bring on a new irritation, changing the chronic

into acute urethritis, which in its turn can be readily cured according to well-known principles.

Treatment. The urethral tube is introduced carefully until the patient feels soreness. The plug is then withdrawn, the endoscope attached, and the focus inspected. The mucous lining is now to be cleansed of all discharge, by either a sponge or a pledget of cotton. If granulations are detected, some application should at once be made, and the instrument withdrawn. This should be repeated from every four to eight days, according to circumstances. *Too much should not be attempted at once.* My rule is to touch only *one* place at a sitting, and not to repeat the application too soon. I always treat the urethra from the orifice inward; *i. e.*, apply the solution to the first granulation detected, never going beyond this until it is cured. As soon as this is done I search for the next one, and so on; the more numerous the granulations the longer therefore will be the treatment. As has already been remarked, the granulations bleed very readily. Hence great care and gentleness are necessary in order to avoid injuring them, otherwise all view of the parts is quickly cut off by the flow of blood.

Very many and very different substances, solid and in solution, have been used in the treatment of this affection. Among them may be mentioned nitrate of silver, iodide of potassium, the different salts of zinc, of iron, tannin, etc., applied in varying degrees of strength. In my own hands, the remedy which has given most satisfaction is the solution originally recommended by Desormeaux: to-wit, nitrate of silver, one part; distilled water, three parts. To some practitioners this will doubtless appear to be of too high strength. In my own experience, however, I have never known it to give either pain or inconvenience, while, on the other hand, I have often seen weaker solutions cause much suffering. A cardinal principle, however, in the use of strong agents in granular urethritis is to apply them with the utmost care,

delicacy, and circumspection to *the seat of the disease only, avoiding always the healthy tissues, and never keep them too long in contact with the parts.*,

I need hardly remark that the ordinary treatment of granular urethritis is by means of injections and medicated bougies, and is notoriously unsuccessful. The reason why both these methods of treatment must generally fail may easily be understood. The granulations, which are the seat and immediate source of the discharge, occupy but a small part of the urethral canal, the remaining portions of which are comparatively healthy. It follows therefore that a treatment which reaches alike both healthy and diseased structures must be either too powerful for one or too weak for the other. If strong enough to cure the granulations, it is also strong enough to produce a general urethritis. If sufficiently weak to excite no inflammation of the healthy surfaces, it is too weak to cure those which are diseased. Treatment effected by the aid of the endoscope avoids all this. Here, whatever the agent used, it may be applied directly to the diseased spot, and to that spot alone. The neighboring healthy territory need not be encroached upon or in anywise disturbed. I therefore venture the statement that granulations of the urethra can not be intelligently treated without the aid of this instrument. But I will not consume further time with this portion of the subject, but proceed to relate as briefly as possible a few cases of the disease treated by the method under consideration.

Case I.—A. W. was treated by myself for chronic gonorrhea five years ago. On July 9, 1869, he came again under treatment for a gleet. Had gonorrhea eight months ago, which was apparently cured, but the discharge returns off and on. The slightest cause brings on a discharge of a regular gonorrheal character, and if this is stopped a gleety discharge of about three drops every morning occurs. Sometimes has pain in the urethra. To-day the discharge is more

profuse and of a milky character. Endoscopic examination revealed granulations two and a quarter inches from the meatus, to which the nitrate of silver solution was applied, changing the color to a normal hue.

July 13th, another granulation was discovered about the fossa navicularis, and the solution applied.

July 16th, solution was again applied to the second spot. Drawings from nature were made by Dr. Ficht. Figure 18 represents well the state of disease, and the peculiar strawberry appearance to which I have previously directed attention. Figure 19 shows the same place as it appeared after the application had been made. It will be observed that the granulations have disappeared, and the color changed to a grayish white.

July 20th, a thorough examination was made of six inches of the urethra. The whole tract was found highly inflamed, congested, and thickened. Granulations existed in many places, mostly at the end of the bulbous portion, six inches from the meatus. The solution was applied thoroughly to two places, and slightly to the whole tract.

July 28th, the entire urethra is improved. No ulceration or discharge of any kind. The granulations have begun to disappear. The whole tract of the urethra for six and a quarter inches was touched lightly with nitrate of silver, which gave not the slightest pain. Patient continued to improve.

August 12th, is improved. Solution of one drachm nitrate of silver to one ounce of water applied.

September 25th, endoscopic examination showed the urethra healthy. Patient discharged. In January, 1870, he writes that he has remained well.

CASE II.—E. J., aged twenty-five years; coachman; colored; married. Eight years ago, when in the army, he contracted a gonorrhea, which continued for eight months. Since that time has suffered from gleet.

September 2, 1869, examination with the endoscope pro-

duced only slight irritation and no pain. Has no stricture. Found granulations in two places, the first one and a quarter and the second two and a quarter inches from the meatus. These granulations sometimes bled profusely on the slightest touch.

From September 6th until October 22d the patient was examined every three or four days, and the solution of nitrate of silver applied to the diseased spots, *one* at each sitting, whereby each was touched but once a week. The hemorrhage from the granulations sometimes gave trouble in the examinations. The patient improved so rapidly that against my wish he quit all treatment on the 22d of October, believing himself cured.

February 19, 1870, the patient returned worse than ever. An examination again revealed two sets of granulations. The former treatment was repeated, with the occasional use of the liquor iodin. comp.

March 5th, a small stricture was found three inches from the orifice, behind which the gleety discharge could be distinctly seen.

March 15th, both granulations and stricture bled on being touched.

March 21st. Figure 20 represents very exactly the state of this patient's urethra. It shows the longitudinal fibers radiating to the periphery with granulated and highly red spots, which bleed on the slightest touch. The whole surface is intensely red and injected. Figure 21 exhibits the same after the solution of nitrate of silver has been applied. The inflammation and ulceration have now disappeared, and the color changed to white and gray.

The same treatment was repeated. The stricture was relieved by gradual dilatation. Early in April the patient was so much improved that a weak solution of iodine in glycerine was substituted for the caustic, and on the 19th of the month he was discharged cured.

CASE III.—F. E. C., jeweler, from Newark, has had gonorrhea five times, and a discharge off and on for years. Has now no pain or irritation, but some discharge. Is very depressed in spirits; hypochondriacal; energies gone; talked of suicide. Is anæmic. Urine normal.

October 1st, 1869, granulations found three inches down the urethra. Made the usual application.

October 11th, is much improved; the granulations have nearly disappeared; better in every way.

The patient absented himself for three months. During this time his life was one of dissipation. The discharge returned. On the 27th of January, 1870, when he again presented himself, the urethral canal was so narrowed that only the smaller tube could be introduced. The parts were very sensitive, of a deep red color, and numerous granulations were found occupying different situations. An accurate view of those seen in the membranous portion of the urethra is given in figure 20. Three inches from the meatus an obstruction was encountered, which, however, was readily overcome by a little manipulation. Inspection revealed large granulations at this point, constituting that form of stricture, not organic, to which I have previously alluded. Solution applied.

February 5th, the entire canal is much improved. A No. 10 sound was readily carried through the stricture. During February only four applications were made in different places for about seven inches down the urethra. Tonics were ordered. Patient gained much in health and spirits.

Was examined seven times in March. On one occasion a profuse hemorrhage followed the introduction of the tube. The effect of this seemed, as I have also observed it in other cases, to be salutary, while the depletion of the congested vessels rendered the parts more accessible to treatment. Figure 22 represents the parts, March 21st. Figure 23 represents a point about two inches down the urethra to which the solution has just been applied. This was the last diseased spot

discovered. It is already improving. I think it will be found interesting to compare figures 20 and 22—representing the same spot during an interval of two months' treatment.

The endoscope displayed a healthy urethra early in April. On the 26th of April the patient was discharged cured. A month after he writes that he continues well, has resumed work, and is engaged to be married.

CASE IV.—D. H., merchant, has gleet; sometimes experiences much uneasiness in the penis, accompanied at times with frequent desire to urinate, and some straining and burning in the act. Has had repeated attacks of gonorrhea, several of which were followed by a gleety discharge. Is a high liver, and accustomed to much wine. Urethra slightly narrowed, not sensitive, but the small tube was followed by blood when withdrawn. Granulations were found scattered throughout the urethra down to the prostatic portion; entire mucous membrane highly inflamed, and of a uniformly deep red color. The first granulations, which lay two inches from the meatus, were touched with the solution. The application had to be made a second time before the parts assumed the proper hue.

March 7th, solution applied three inches from meatus. March 10th, solution applied three and a half inches down. March 14th, hemorrhage from the last-discovered granulation was checked by the application. March 16th, treatment renewed. March 19th, a sound (No. 11) was introduced into the bladder without difficulty. March 23d, a new granulation was discovered fully six inches down, and was touched on that day and again on the 28th with the solution. March 31st, parts all much improved. The whole urethra has assumed a healthy color, and no granulations are any longer visible.

April 5th, somewhat of a relapse was observed. Solution applied four inches down the urethra. April 8th, liquor iodin. comp. applied five inches down. April 18th, solution applied seven inches down. April 25th, found everything healthy.

May 2d, dismissed well.

CASE V.—W. W. D., of Newark, has had gonorrhea twice, the first time six years ago, since which he has been troubled more or less, off and on. Has at times an irritation in the whole urethra. Now has a gleety discharge, which glues up the urethra every morning. This state has lasted for over three years.

March 21st, sound No. 12 enters easily, but gives pain. March 26th, the large tube of the endoscope entered easily. The first three inches were found in a granular state throughout, accompanied by a few small ulcers. The solution was applied to two places, and a weak injection of chloride of zinc ordered. March 29th, has bled since last examination, and the discharge is now bloody and purulent. Some pain on passing water. To-day feels better. Application made to a granular surface an inch and three eighths from the meatus. No hemorrhage followed.

April 2d, examination per glass tube, through which a solution of ten grains nitrate of silver to one ounce of water was applied by the atomizer. April 6th, application of the same solution four inches down. The first three inches have much improved. April 9th, is worse; some hemorrhage. Sounds alone were introduced. April 19th, solution applied four inches from meatus. April 22d, application carried six inches down the urethra. April 27th, the granulations have disappeared, but the urethra continues to present an unhealthy look. Some discharge is still present. A single injection, containing ten grains nitrate of silver to the ounce of water, was ordered. Two days afterward this was changed to a weak solution of sulpho-carbolate of zinc, under which the discharge quickly disappeared. Patient dismissed cured on May 13th.

I could easily increase this list of cases with others equally striking, but those detailed will, it is hoped, be sufficient to direct the attention of the reader to the extreme value of the endoscope in the management of chronic urehritis.

Before concluding this paper, however, it is proper to state

that the endoscope affords almost equal satisfaction in the treatment of acute urethritis in the first or prodromic stage; *i. e.*, before inflammation proper has set in. After the discharge has actually commenced, and pain and ardor urinæ, etc., are present (the first stage of authors), treatment through the endoscope has *uniformly failed to cure.* But even here it unquestionably shortens the duration of the disease, allays pain, etc., but it does nothing more—does not *cure* as in the earlier stage alluded to.

The urethra, examined by the endoscope in the prodromic stage of inflammation, exhibits near the meatus, generally in the fossa navicularis, sometimes immediately opposite, a spot of more than ordinarily deep color, with red center, and paling gradually toward the periphery until lost in the healthy tissue. This spot, covered by a light-colored secretion of abnormal viscidity, is sensitive on pressure. When brought fairly into view and thoroughly cleansed, *a single application* of the solution of nitrate of silver, made as I have elsewhere indicated, will *almost invariably effect a cure. I have not known it to fail in a single instance;* while in my hands it has never given rise to an unpleasant symptom.

As prostatic catarrh is often complicated with granular urethritis, a word concerning it may not be out of place. A single case will perhaps best illustrate the subject.

B. C. D., aged forty-eight years, married, has suffered for the past eight months with pain in the bladder and penis. Is weak, despondent; has lost flesh; has occasional losses of semen; complains of pain in the supra-pubic region, at the neck of the bladder, about the prostate, and at the end of the penis. The pain is aggravated during micturition. Passes large quantities of urine containing pus, epithelium, and a few spermatozoa.

March 11th, granulations found in the fossa navicularis. They bled on being touched. After the bladder was washed out with tepid water, solution of nitrate of silver was applied,

and a No. 12 catheter passed, which gave rise to much pain, particularly in the prostatic portion of the urethra. Three days after this granulations were discovered in the prostatic portion. They were excessively sensitive, very red, and bled on the slightest touch. The application of the solution caused some pain. Three other applications were made during this month. Early in April the patient had improved much in his general condition; had gained in flesh, and suffered less pain. On the 13th of the month the appearance of the urethra had changed to that of health, and the patient was dismissed cured.

Through the kindness of Dr. Emmett of the Woman's State Hospital, of the late lamented Dr. Elliot, and Dr. Fordyce Barker at Bellevue Hospital, and Dr. Budd at the Charity Hospital, I have been enabled to see a very considerable number of diseases of the urethra and bladder in the female. I have treated of these in a paper recently read before the Medical Society of the State of New York, and will add here but a few supplementary cases. The first is one of acute urethritis with ulceration.

Miss L. N., aged twenty-six years, has complained for a year of pain in the urethra and occasional incontinence of urine. Has pain in micturition, which is suddenly increased when she passes the last drops of water; afterward there remains for some time a burning pain. At other times feels well. Passes water every one and a half to two hours. Urine is clear, but at times has passed small coagula of blood.

March 11th, bladder injected with warm water, which did not give much pain. March 15th, endoscopic examination was not successful, the water pouring faster into the tube than it was possible to remove it. March 21st, endoscope with large tube revealed only half an inch from the orifice of the urethra a large ulcerated surface, which was painful, and bled freely on touch. Figure 24 affords a true representation of the ulcer, which, being deprived of its epithelium,

is very sensitive, and bleeds on the slightest irritation. The red color shows the blood which covers the spot. The yellow color is imparted by a purulent discharge, and indicates the ulcerated surface. The usual solution was thoroughly applied, and changed the whole appearance immediately. This is well shown in figure 25. Patient felt relieved, and was free from pain almost immediately. That this sore was not found at a former examination is explained by the tube having been introduced too far, thereby overriding the diseased part.

March 24th, since the last application the patient has been comfortable. On examination found that the sores have nearly healed. Solution applied but slightly.

April 8th, patient well.

The next case is one of *granulations in the urethra and bladder.*

Mrs. M. A. T., kindly sent to me by Dr. J. H. Granniss, of Saybrook, for incontinence of urine, associated with a constant pain in the bladder and urethra. Has been suffering for four years. Has general tuberculosis, lateral curvature of the spine, and Pott's disease. Can not sleep without narcotics; coughs constantly; is nervous and extremely emaciated; can neither stand erect nor walk any distance.

January 17th, examination per endoscope; found granulations in the urethra and bladder. The latter was mostly denuded, deprived of its epithelium, and bled on the slightest touch. The solution was applied two and three quarter inches down the urethra, and was followed by bloody urine. January 19th, solution applied two inches deep. She felt easy immediately afterward. January 22d, was up during last night to void urine four times, which is *less* than during any night for the last four years. Urethra was examined with the glass tube, and found highly injected and red. A solution of iodine was applied. From January 22d until February 21st eight applications have been made to different parts of the urethra and bladder.

February 25th, since last application has felt remarkably well. Has slept soundly without an anodyne, and is free from pain. During March she had a violent attack of diarrhea, which weakened her so much that she could not leave the bed, but the bladder and urethra troubled her no more. She died, however, of tuberculosis some weeks after.

NEW YORK, 145 WEST FORTY-SEVENTH STREET.

[Since this article was received Dr. Newman writes that he has succeeded in constructing an apparatus by which he is enabled to substitute the light of ordinary gas for Cruise's lamp. It can be attached very readily to an ordinary gas-burner, is portable, and furnishes a very elegant light.

EDS. AM. PRAC.]

Fig. 24.

Fig. 25.

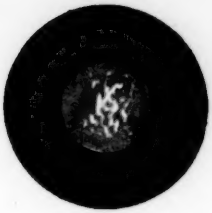


Fig. 22

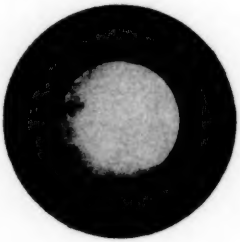


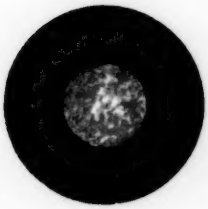
Fig. 23

Fig. 20

Fig. 21.

Fig. 18

Fig. 19



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Reviews.

A Practical Treatise on the Medical and Surgical Uses of Electricity. By GEORGE M. BEARD, A. M., M. D., and A. D. ROCKWELL, A. M., M. D. New York: William Wood & Co. 1871.

The deepest impression of a general nature left upon the mind after a careful study of this book is that surely the common complaint against electro-therapy — that it is a knotty system—lacks a good foundation. One feels inclined to congratulate the authors that they have so fairly represented the science in so simple a manner, and made the art of electrization the possible property of every physician. The complicated methods and nomenclature that have disheartened the puzzled student of previous works on this branch of medicine have been pruned of redundancies and confounding synonyms. They are left scantier, it may be, but more grateful to an orderly mind, and far more easy of comprehension. One is struck also with the wide domain of use appropriated to what is called "general electrization," a method which was first systematically investigated by the authors, who have here for the first time described and explained its rather remarkable effects in many morbid states.

These are the most conspicuous original features: the last calls for a more extended notice. In the preface, and in scattered paragraphs through the subsequent chapters, are well-timed arguments tending to show that electro-physiology is not a sufficient basis for electro-therapy, whose essence is clinical experience, but as related to it should explain rather than guide.

There is greater occasion for these observations because of the opposition that derided the influence and retarded the advance of "general electrization," on account of its illegitimate birth among the "magnetic healers," who for years have hawked its virtues on the highway, and because exacting physiologists and pathologists could not elucidate by reason its novel phenomena.

In setting forth their plan the writers say: "Our aim has been to represent with strict impartiality all that has really been accomplished in this department by every school in every country, and by all methods." The commendatory verdict of the profession will assure them of their success.

Cropping out on every hand, as their fundamental strata for electro-therapy, may be seen the following propositions (we borrow their words): "1. That electrization, besides being merely a local stimulant, also exercises an influence over general and local nutrition at once unique and unrivaled, and that entitles it to the highest rank among constitutional tonics. 2. That the accepted system of making the applications exclusively local is both illogical and inconsistent; that in the use of electricity, as of every other remedy, constitutional diseases should be treated constitutionally. 3. That the best method of bringing the whole system under the direct influence of the current is by general electrization, as here described; and that by the use of this method the success of electro-therapeutics is materially enhanced, and its sphere very greatly widened, so as to include a variety of frequent and distressing constitutional morbid conditions for which merely localized electrization is but imperfectly indicated."

This application may include either the faradic or galvanic current alone, or both together, under the title of galvano-faradization. It is recommended that both apparatuses should be obtained, for cases arise where one will not answer, and the other may; but if only one can be had, the faradic is better for this sort of administration. Being frequently interrupted,

it requires less force to produce muscular contraction. It produces greater mechanical effects on the tissues, and is less likely to injure when incautiously used. The strong probability is that general practitioners will be satisfied with the range of employment belonging to the faradic instrument, because it is much cheaper, more manageable, and more portable, while the galvanic requires technical study, constant attention, and even when most compact is troublesome to carry about.

The authors favor Kidder's make of instruments, and protest against the extended use of the *magneto*-electric or rotary machine. In their opinion it has done much evil to the cause of electro-therapy, and militated against its reception by the profession. They admit that it is frequently of service in rheumatism, paralysis, and some kindred disorders. Many who have operated both will join them in the opinion that for the wide range of diseases in which faradism is called for it is neither reliable nor effective; and in conditions of irritability it is contraïndicated, on account of its rough and disagreeable current. It is further objectionable because an assistant is required to turn the crank.

The minor appendages necessary for general faradization are a brass ball as positive and a copper plate as negative electrode. Around the ball a large soft, wet sponge is folded to render it agreeable to the patient when applied directly to his person, or to the operator when he allows the current to pass through himself, and employs his hand as an electrode. The patient sits on a low stool, with his bare feet in contact with the copper plate, which rests on a piece of heated soapstone to make it more comfortable. The seance begins with a very feeble current, which is gradually made as strong as the patient can stand without discomfort, while the sponge or the hand is passed over the body.

If, as in some instances, only a single place on the body is to be chosen for this application, the cilio-spinal center must

L. of C.

be preferred. The cervical sympathetic nerve originates in the spinal cord, between the sixth dorsal and seventh cervical vertebræ. When this point is electrically excited a dilatation of the pupil through the sympathetic nerve is produced. From no other surface point can so many important nerves be influenced as from this *centrum cilio spinale* of Budge and Waller. An agreeable thrill is communicated to the nerves and vital organs, sometimes exciting laryngeal cough, at other times causing peculiar sensation in the stomach and tingling in the fingers. There are two other important points; one just by the posterior border of the sterno-mastoid muscle, where lie the brachial plexus, the pneumogastric and phrenic nerves, and the other immediately above the sternum, where the inferior cervicle ganglion can be irritated. During the whole sitting the current traverses the body from above toward the feet.

Details for the application, rules as to the strength and frequency, theory of its *modus operandi*, and all requisite information as to its effects are minutely discussed. It is claimed that decided benefit is the rule, and often permanent cures have been achieved, in treating with it nervous dyspepsia, insomnia, hypochondriasis, paralysis, neuralgia; indeed all the essential nervous maladies, and not a few organic troubles.

After making full allowance for the natural partiality expected in the most just men who introduce under their own auspices a new thing to science, great credit will be awarded Drs. Beard and Rockwell for their thorough cultivation of so unpromising a field. We are convinced from the theoretical arguments offered (for they are not unmindful of man's craving for causes), and much more from the recital of individual cases and statistical summary of results of treatment, that this is a method that deserves the trial, and will not fail to win the approbation, of the profession.

The book begins with an "abstract and brief chronicle"

of the established truths of electro-physiology, which contains all the needful knowledge on the subject that any quarter of the world has furnished. Electro-surgery has received due attention, the authors confirming by the voice of their experience the favorable reports current in correlated treatises and medical periodicals.

Some trifling errors of misprint have attracted our comment. On page 61 occurs the following clause: "An anæsthetic or slightly paralyzing effects." On page 115 this enigmatical sentence will be found: "For more than a century diseases of which they knew but little, by electric currents of which they knew even less, and that too not unfrequently with good results." The loneliness of that word "diseases" is pitiable to a degree. On page 132, and again on page 169, Gaiffe's battery is said to be acted upon by the "bisulphuret of mercury." It should read *bisulphate*. We suspect that on page 262 *ultimate* should be substituted for "alternate" in the following: "We judge the disease is confined to the alternate nerve ramification only." "Isolation" is used instead of insolation as a synonym for sunstroke, and the same mistake occurs in the index. J. W. H.

Chemistry: General, Medical, and Pharmaceutical. By JOHN ATTFIELD, Ph. D., F. C. S., etc. Henry C. Lea. 1871.

Such is the abundance of chemical text-books that students are well excused for their usual distraction as to choice. As the course of chemistry in most American medical schools includes a short survey of chemical physics, those works which consider both the sciences are the most popular.

It is taken for granted in the book before us that the student is well acquainted with the principles of physics, a very rare proficiency for even medical graduates. The absence of

a physical department will therefore militate somewhat against the general introduction of this very excellent treatise as a text-book.

The variety of type employed in printing the heads and bodies of paragraphs impresses us as useful for reference and calculated to stimulate attention, at the same time fixing firmly in the mind of the reader the arrangement and bearing of the several parts. Judiciously distributed at the close of each section are well-selected questions, by which a student can test his advancement.

While it is admitted that a knowledge of the properties, the mode of preparation, and the identification of elementary and pharmaceutical substances can only be well acquired by experimental study, yet those lacking facilities for such a course can get a tolerable understanding of them by simple reading of this book, so plain and perspicuous are its methods and descriptions. Its system of notation is in harmony with the most modern theories. The nomenclature is chemically more explicit and more in keeping with recent facts than that used in older works. Medical men have objected to some of the terms advised in very late chemical treatises, that they are too unlike the original for general use; in which opinion the author concurs. Of the older names he writes: "These names are already well known, can be easily rendered in Latin, and then admit of simple abbreviations and adaptations, such as are employed in prescriptions, advantages not possessed by the more rational terms. While therefore the chemistry of iron is rendered simple and intelligible by the use of terms ferrous and ferric, the employment of older and less definite names may very well be continued in pharmacy, as being practically more convenient." J. W. H.

Clinic of the Month.

DIGITALIS AND HEART DISEASE.—Dr. Balthazar W. Foster, Professor of Medicine in Queen's College, Birmingham, has contributed to the British and Foreign Medico-Chirurgical Review a paper on this subject, characterized by the practical sense which distinguishes all his writings, and in it does more to fix the real status of digitalis as a remedy in cardiac trouble than anything yet written. For nearly a hundred years physicians have prescribed digitalis, in a sort of haphazard way, in certain forms of dropsy and in heart disease. The drug which has been justly called the "opium of the heart" is to this day given in the most opposite conditions, for the most contradictory reasons, and, as might be expected, with the most varied results. Dr. Foster has studied the action of digitalis in heart disease in connection with the sphygmograph. He looks at the heart mainly from a mechanical point of view, as a pump furnished with stop-valves to direct the stream of blood aright; and very properly remarks that the mechanism of the compensation in each form of valve lesion must first be mastered before correct ideas of treatment can be formed, or the true position of any drug as a remedy in heart cases can be defined.

1. *Aortic insufficiency.* This condition acts on the circulation in a purely mechanical way: the aortic stop-valves are imperfect. To counterbalance this the left ventricle dilates and hypertrophies, and the action of the heart becomes more rapid. Here digitalis would augment the ill-effects of the insufficiency by slowing the action of the heart. To diminish the frequency of the heart's beats by digitalis is but to

increase the period of the dilatation of the ventricles. The low arterial tension may require increasing, the heart's strength may want reënforcing; but these two indications can not be fulfilled by any remedy which, like digitalis, adds to the prime evil. There is one condition, however, even in aortic insufficiency—that of over-compensation—in which a few doses of digitalis sometimes do good. This condition is marked by violent action of the heart, bounding vibratory arteries visible all over the body, headache, flushed face, noises in the ears, urine free from albumen, etc. The action, however, must be watched, and the moment the pulse falls the remedy must be stopped. In these cases of over-compensation Dr. F. generally prefers hydrocianic acid, caffeine, and sometimes aconite; believing that they act equally well, and are less liable to cause unpleasant symptoms than digitalis.

2. *Mitral stenosis.* This is also a purely mechanical impediment to the circulation, which acts, during the same period of each cardiac revolution, as aortic insufficiency. The latter renders the ventricle overfull, mitral stenosis keeps it too empty; yet both tend to drain the arterial side of the circulation: the one by allowing the blood to regurgitate, the other by opposing its advance. The impediment can be compensated for in two ways: by increasing the propelling power, that the blood may be driven at a greater speed, or lengthening the time for its passage. The first of these ends is often effected in a very perfect manner by the hypertrophy and dilatation of the left auricle and right ventricle; but presently the rapid, irregular, and unequal pulse, feeble arterial tension, and pulmonary congestion denote that nature is being overcome. Under these circumstances the auricle must have more time to fill the ventricle. And this, to say nothing of the increased power given to the cardiac muscle, is exactly what digitalis effects. By slowing the action of the heart, the period of time during which the blood from the distended auricle can flow into the ventricle is increased, and as the

extra time allows more blood to pass through the narrowed mitral orifice before the final effort of the auricle is made, that effort is made on a smaller quantity of blood, and is consequently more effective; for the smaller the quantity of blood which the auricular muscle has to push before it the greater will be the velocity given to the current. The ventricle, though contracting less frequently, contracts more effectually. Instead of eighty or ninety irregular contractions per minute, no two succeeding ones equal in force, and some so valuless that they are not perceptible at the wrist, we get some sixty steady, equal beats. The pulse grows in force, fullness, and regularity; the arterial tension rises; the pulmonary congestion diminishes; the kidneys, before inactive, wake up to their work, and the advancing dropsy recognizes its master and beats a sullen retreat. Yet even in this form of valvular disease, in which it is of all drugs the most valuable, digitalis has been declared to be inadmissible. It is, however, only in the very last stage of mitral stenosis that the remedy fails, and then because no drug can restore the functions of an organ irrecoverably worn out. Dr. F. recognizes three classes of cases of this form of disease. In the first the pulse is quite regular, or nearly so; the arterial tension, though low, is not associated with marked pulmonary congestion; and the patients, under favorable conditions, suffer but little. In these cases digitalis is not often wanted; but whenever the patient complains of more than usual dyspnœa and diminished urine, with increased rapidity of pulse, it is a safe remedy, and one which almost invariably relieves the symptoms. To such cases among his out-patients he often gives one or two drachms of the infusion, combined with perchloride of iron, per day. In the second class the pulse is irregular, and all the symptoms are worse; then digitalis is still more striking in its effects, but to get these fully the patient should be kept in bed. In the last class it is generally too late to get good results. The albuminous urine, the

pulmonary complications in the shape of oft-recurring hemorrhage, and the general dropsy, tell that the heart is hopelessly unequal to its task. Occasionally even in these cases digitalis will succeed, especially if preceded by the abstraction of a few ounces of blood, so as to relieve the venous distension. The duration of the albuminuria is in these cases the most important point whereon to found an opinion. The chance of recovery is generally in inverse proportion to the duration of this sign. Two cases in which digitalis failed unexpectedly were examples of mitral stenosis, associated with a similar lesion on the right side of the heart. In the first case the digitalis was powerless all through; in the second it saved life several times, but on a last occasion failed; and then after death, as had been diagnosed during life, recent tricuspid narrowing was found.

3. *Mitral insufficiency.* Whether digitalis will do good in this form of disease will depend altogether upon the healthiness of the cardiac muscle. If muscular degeneration has occurred, if the heart cavities are dilated, the remedy will do no good; but, on the contrary, much harm. Where there is good, steady muscular action—no wavering in the contraction, no inefficiency in the sphincter-like narrowing of the auriculo-ventricular orifice, and no unsteadiness in the action of the papillary muscles—the compensation is adequate, and things go well; but any effort which disturbs the artificial equilibrium is quickly followed by confused muscular action. It is this which digitalis corrects. In place of a large number of ineffective contractions, it concentrates the power of the ventricle on a smaller number of well-directed, steady beats, each throwing a larger charge of blood into the arteries, and so diminishing beat by beat the over-distension of the right heart. The right ventricle so aided is also aiding by the more vigorous efforts which the digitalis enables it to make.

4. *Aortic obstruction.* Digitalis can do little for such cases, because there is little good to do. As long as the cardiac

muscle is well nourished there is no need for the remedy; when the muscle ceases to be healthy digitalis is worse than useless. The heart acts in these cases slowly and forcibly, and the slowing action of digitalis becomes its dangerous action, and more than counterbalances any good effects which might be expected from its action on the cardiac muscle. In a case of pure aortic obstruction Dr. F. ordered digitalis. The pulse fell under its use in the course of three days from sixty-two to fifty beats per minute. This diminution in the frequency of the heart's action was associated with no improvement in the symptoms. On the contrary, the patient, who had been comfortable before its occurrence, now complained of a feeling of faintness and giddiness, and had decidedly increased dyspnœa. The remedy was withdrawn, and all these symptoms disappeared. Some few years ago a man came under his care for chronic bronchitis, whose pulse beat ordinarily only twenty-seven times a minute. He had no discoverable heart disease, and some years after the heart was found to be healthy. Digitalis was cautiously administered to this patient. The pulse fell to twenty-three and twenty-four per minute, and a sense of precordial anxiety and slight attacks of vertigo were produced. On the discontinuance of the drug these symptoms ceased to trouble him, and the pulse returned to its ordinary rate of twenty-seven. It is only when the hypertrophy exceeds the limits of compensation that digitalis is useful; then, by slowing the pulse and regulating the heart muscle, its good effects are well seen. When both forms of aortic disease are present we have to treat the one which predominates, and to which the general symptoms are due. This is almost always the regurgitation, and digitalis is hurtful as a rule. In double mitral we have a coïncidence of two lesions, both demanding digitalis, and we may give it with the best effects. When mitral regurgitation is associated with aortic, we have a rupture of the compensation of the aortic lesion, and digitalis will not

help us to remedy it. The rule is in all cases to treat the predominant valve lesion, and never to expect good from the use of digitalis when the heart muscle is unsound. Dr. F. constantly prescribes it for hospital out-patients from a distance, and continues its use for weeks. He gives the infusion, and tests its continued action by the effect on the secretion of urine. As long as the quantity of urine increases, or keeps up to the maximum which the digitalis has produced, the drug is acting beneficially. Not long ago Dr. Peacock, one of our most eminent authorities on heart disease, wrote: "In cases of mitral valvular disease I believe, however, that digitalis is eminently useful, not by any influence which it exerts over the heart itself, but from its powerful diuretic action." This sentence is full of practical wisdom; but we may now say, Dr. F. thinks, that the beneficial effects are not, as Peacock put it, on account of its diuretic action, but the converse; the diuretic effect is the result, the outward and visible sign of its beneficial action. The diuresis indicates a restoration of the normal balance between the contents of the arteries and the veins, an increased arterial tension, and consequently a refilling, under normal pressure, of the empty capillaries of the Malpighian bodies. The high-colored scanty urine, loaded with urates, is replaced by a clear and copious stream, which tells of a steadily beating heart and a firmer pulse.

Compound Fractures.—Professor Eben Watson, M. D., of Glasgow, manages these injuries when they occur in the extremities by first securing the bleeding vessels, if there are any, by torsion or by catgut ligatures. He then thoroughly washes and syringes the wound with a solution composed of one part of crystallized carbolic acid, eighteen parts of water, and two parts of methylated spirit, and applies over the whole a compress of lint wet with the solution, and protects this with an oil-silk or gutta-percha cover; puts the limb in position; bandages and splints it. For the first week he

renews the dressings daily. He has an assistant to play upon the wound with a gentle stream of the carbolated solution from a syringe, held above the parts, until fresh dressings are applied. As the result of his experience, he states that no interference with the bones in a compound fracture should be attempted unless perfectly loose fragments present themselves, so as to be easily extracted. Rather than interfere with the bones in such cases, he is content if they be not quite completely adjusted. In support of this practice he says that he has several times seen large portions of the fractured ends of bone denuded of periosteum, and not thoroughly reduced, become in due time covered over with granulations and healthily skinned. Even if necrosis occurs in such a case, it is always slight in extent, and the immediate forerunner of the most satisfactory result. He thinks the spirituous solution of carbolic acid described above preferable to any other. In his hands it almost entirely prevents suppuration, but is not, he says, favorable to the process of cicatrization; and therefore, when the granulations are on the level of the skin, he interposes a piece of common oil silk between the dressing and the healing surface. In this way the action of the carbolic acid is sufficiently maintained, and the skinning of the raw surface is hastened.

As to constitutional disturbance or secondary fever, Dr. W. states there is no such thing under the carbolic-acid treatment. When the patient has recovered from the shock of his accident, his state and progress are little, if at all, different from those which present themselves in cases of simple fracture. There is hardly any suppuration and no suppurative fever, and the only secondary occurrences which take place are those that have been caused by the primary injury. There may be death of parts more or less extensive from bruising or from laceration of important blood-vessels, and this at present is the chief cause of secondary amputations.

The old rules for determining upon this procedure must

now be abandoned. One needs not now to wait for days before adopting it. The lesion soon becomes apparent before either suppuration or putrefaction commences, and the surgeon may at once amputate the cold or livid limb. Again, in other cases, he believes also from the effects of bruising, though to a more limited extent, abscesses occur in the injured limb. These may occasion much uneasiness to the patient, and perhaps some trouble to the surgeon in regard to the dressings and splints, but their ultimate influence on the result is seldom, if ever, injurious. (Practitioner.)

THE USES OF ACONITE.—In an article in the Practitioner on the action of aconitum-napellus, by Dr. Charles Douglas Phillips, he states that this substance is always indicated in the early stage of simple inflammatory fevers, where as yet but little organic change has taken place, as in the early stage of pneumonia and most acute congestions. It should be given in all inflammations of serous membranes before the exudation has passed the plastic stage, especially in pleurisy, peritonitis, etc. When administered early after the invasion of the disease, it quickly lessens the frequency of the heart's action, calming and subduing this, while at the same time it moistens and often bathes the skin with profuse perspiration. It thus allays the fever, and prevents the spread of any congestion which may have already taken place.

In the early stages of inflammatory fever it not only lowers the frequency of the heart's action, but brings the temperature to its normal standard, and having accomplished this it ceases to be of much further use. In nine recorded cases of pneumonia in the first stage, several of them implicating the pleura more or less, in none did the fever last longer than six days, and in five of them it left in about forty-eight hours, reckoning from the rigors; and in all these cases, in from three to six days after the temperature had fallen to 99°, or below it, the lungs became quite natural. In none of these did the

pulse fall to the normal standard without the temperature also falling at least to 99°; but in several of them the pulse kept high, and the temperature sank to below 99°, making it very probable that aconite had done its required work. In eleven other cases of pneumonia, all of which had passed into the second or consolidated stage, he gave aconite a fair trial, and in none could he perceive any effect in removing the consolidation. At the circumference of the solidified lung there is generally a tendency to the congestion spreading. This aconite will control and remove, but it has no power over the solidified part comparable with certain other drugs.

Aconite is valuable in tonsilitis and ordinary sore-throat. It relieves those irritable tickling throat coughs so often met with in throat and lung affections; is useful to plethoric people suffering with asthma, accompanied with a short dry cough, an anxious look, a sense of great oppression, often amounting to suffocation, and a full strong pulse; in croup, hemoptysis, and epistaxis; in coryza and acute catarrh.

In simple apoplexy, especially when occurring to stout, plethoric persons, where the vessels of the brain are congested but not ruptured, accompanied with a full strong pulse, hot dry skin, flushed and turgid face, and a more or less comatose state, aconite is the best remedy. There is no doubt that aconite has a most depressing, and in some instances an almost paralyzing, effect upon the heart, and should be avoided in every case of apoplexy where there is a tendency to syncope, a pale face, a feeble and perhaps intermittent pulse, with a cold and clammy skin; but should a decided reäction take place, and we find it necessary to reduce the power of the heart and to diminish the force of the circulation through the brain, then we must have recourse to aconite, as certain to render us the most speedy and effective aid. It is of great use in those cases of palpitation of the heart depending upon simple cardiac hypertrophy of the left ventricle; but in hypertrophy of the left side of the heart

with diseased valves, admitting of regurgitation, aconite is dangerous.

In sudden and abrupt suppression of the catamenia, where the flow appears at its usual time and in its normal character, but is arrested by a chill, there is no remedy which will act so promptly as aconite in removing the discomfort produced, and in quickly causing the menses to reäppear, especially if the body is kept warm so as to favor any tendency to perspiration. One drop, as a dose every half hour or every hour, is generally quite sufficient to bring on the flow within from four to eight hours from the first administration, and if given within the first few hours after the suspension has occurred.

In thirteen cases of erysipelas or acute inflammation of the skin, implicating, with some of them, the subcutaneous areolar tissue, and in all attended with high fever, the only remedy used was aconite, with an occasional dose of castor-oil, and they recovered within five days of being seized. They were all of a purely sthenic kind, and he does not believe there is any virtue in aconite for the low or asthenic description, equally common in our experience.

In dysentery and dysenteric diarrhea, when the patient suffers from high fever, pains in the abdomen of a griping and cutting character preceding a frequent inclination to stool, aconite will reduce the fever and remove the cutting pains.

Aconite is of great use in those cases of retention of urine with spasmodic stricture which have been brought about by taking a chill. It is also a most valuable remedy in worm fever, as an intermediate with santonin.

In typhus and typhoid fever aconite is of little use. It reduces neither the fever nor the frequency of the pulse. Indeed it is more injurious than otherwise. It seldom reduces the temperature in scarlet fever or measles before the eruption comes out, although it moistens the skin, and

certainly helps the emergence and development of the eruption when due.

In all diseases for which aconite is prescribed he recommends that it be given every half hour to every one, two, or three hours, in single or two-drop doses, according to the severity of the symptoms. In very acute cases it may be given for the first hour every fifteen minutes. It should never be given in any vehicle except water.

Ice in the Rectum in Retention of Urine.—Dr. Cazenave says *(Jour. de Med. et de Chir.)* that during twenty years the following simple expedient has never failed in giving relief in retention of urine. He introduces into the rectum a piece of ice of the form of an elongated oval and about the size of a chestnut, which he pushes up beyond the sphincters, and renews every two hours. Almost always in an hour and a half, or two hours at longest, urethral spasm ceases, a certain quantity of urine is passed, and the bladder is emptied without effort by the patient. If in rare and exceptional cases this does not take place, he introduces again pieces of ice into the rectum, and places broken ice from the anus up to the end of the penis, until the urine flows, which it infallibly does. When there is difficulty in making water, occasioned by prostatic hypertrophy, the good effects of the ice are rather longer coming on, but almost always are produced. In short, in these circumstances (strictures and prostatic hypertrophies) the sedative effects are so well marked, thanks to the effects of the ice, that the introduction of bougies and sounds into the bladder and urethra is always rendered easy to practiced surgeons, and hardly any pain is felt. In our Chronicle for May we mentioned Dr. Baillie's statement that ice per rectum was invaluable in the narcosis of chloroform. We have now to add that the same mode of using the same agent has been reported on for retention. (The Doctor.)

MICHEL'S PROCESS FOR REMOVING EXTERNAL TUMORS.—William A. Bell, M. A., M. B., London, gives an interesting account of the mode of operation for the removal of tumors practiced by a French charlatan, for a knowledge of which Mr. Bell paid no less a sum than twenty-five thousand francs, and which, having now obtained complete information, he has very properly and liberally made public. The preparation used in all cases where the tumor can with safety be reached externally is made in the following way: Asbestos, as soft and free from grit as possible, is reduced by rubbing between the hands to the finest possible fleecy powder. It is then mixed thoroughly with three times its own weight of strong sulphuric acid ($S O_3 H O$). A mass is thus formed which may be easily worked with a silver or gold spatula into any size or shape corresponding to the tumor to be destroyed. Any malignant growth of the breast which is detached and solitary, with the subaxillary glands unaffected, is suitable for treatment, whether open or not makes no difference. In the application of the caustic the adjoining healthy parts of the skin are carefully protected by applying a zone of collodion and pads of linen, and the patient is so placed that the surface of the tumor is perfectly level. The saturated acid asbestos is then laid on the surface to the thickness of half an inch for a tumor the size of a hen's egg. Rapid destruction of the tissues follows, with, after the first half hour or so, but little pain. An oozing of clear watery fluid appears, which must be carefully sopped up. After twelve or fourteen hours' action the first application is to be removed, and a new portion of smaller size adapted to the sore. After this has been applied for twelve hours the operation is complete, and the healing of the deep excavation alone requires to be attended to. Mr. Bell thinks that the plan presents various and considerable advantages over extirpation by the knife, besides postponing in malignant cases for a longer period the recurrence of the disease. (Practitioner.)

Notes and Queries.

CHLORAL HYDRATE IN LARGE DOSES.—Dr. J. G. Rogers, of Madison, Ind., writes: "Observing in the June number of the American Practitioner some considerations on the maximum dose of chloral, in which it is concluded that one hundred and twenty grains is probably as much as the vital powers will bear at one time, I am induced to state that in a case of *mania a potu* in an adult man I have given *one ounce* in six doses, *all within one hour.* It is a well-established law that *effect*, and *not weight or measure*, should limit or fix the dose of any medicine. In the case referred to I proposed to quiet the patient *tuto, cito et jucunde.* To do this one ounce of chloral and an hour's time was required. The patient slept naturally, to all appearance, during three hours, and awoke well but weak, with no nausea, and only a slight headache. Next day he went to his work. The preparation used was of the usual strength. In a case of terrible headache, recurring weekly, in which morphia or chloral could not be satisfactorily used, I gave the lady *one ounce* of bromide of potassium in two doses within an hour. The non-effect of the first half justified the second dose. The headache ceased in fifteen minutes after, and she slept naturally for four days and nights. This rather extraordinary slumber, however, was easily interrupted, and the patient took her meals regularly and went to sleep again. During these short wakings the mind was rational but slow. No functions were interrupted or changed, but the appetite, which before was poor, was much improved. The effect wore off gradually on the fourth day. Since then the attacks have yielded to smaller doses."

RUPIA.(?)—Dr. Wm. F. Norvill, Blackfish Post-office, Ark., reports the following case and asks for treatment:

A patient, ten years resident in the swamp-lands of the Mississippi, an excessively miasmatic region, was much exposed during the great spring flood of 1862, his arms and legs being constantly wet for a considerable period while saving horses, cattle, and hogs from the overflow. In the August following a scaly eruption, diagnosed at the time lichen, occurred on the limbs, from elbow to hand and from knee to foot. On the approach of cold weather this disappeared. About the same period each succeeding year the eruption has returned with increasing violence, but disappeared with the coming of winter. Last winter, however, the disease failed to yield to frost, and has continued to the present time, "spreading in extensive cutaneous ulcers, some of which advance in one direction while healing in another, one having thus crept almost entirely around the leg. Some remain stationary. When an ulcer heals an indelible scar, like that of a burn, remains." The eruption begins as a bleb, in size from a duckshot to a walnut. A crust forms, from beneath which blood, bloody pus, or a honey-like fluid continually flows. The edges of the ulcers are callous and elevated. No syphilitic or scrofulous taint in the patient or his family. General health excellent, and but for the cutaneous trouble would be considered a remarkably healthy man for the region in which he lives. Many treatments have been tried, but without satisfactory results. By removing the scab and applying nitrate of silver the ulcers are healed; "but it is like driving a spile in a quicksand spring—it stops boiling up, but immediately several smaller ones break forth around it."

In this case the diagnosis lies between ecthyma, pemphigus, and rupia—three diseases closely allied in natural history. The description of the case is not sufficiently minute to make it perfectly clear; but as it begins as a bleb, ecthyma is excluded; having callous and elevated ulcer edges, it can

not be pemphigus. It is more probably rupia. The serpiginous ulcers described in this case vividly recall the many rupial sores seen in the Confederate army consequent upon vaccination, and erroneously considered by some as the results of syphilitic inoculation.

Change of climate with Dr. Norvill's patient, at least for a season, is important if not essential. Small doses of Fowler's solution, with the liberal use of ferruginous and bitter tonics, of which the citrate or tartrate of iron and quinia or strychnia are perhaps the medicines best suited to the case, should be freely and persistently administered. Carbolic acid, permanganate of potash, or iodoform should be applied now and then to the sores; and benzoated oxide of zinc ointment, containing twenty grains of tannin, two grains of morphine, and five grains of carbolic acid to the ounce, should be used as a constant dressing. Fresh air, frequent bathing, and good living are of great importance. L. P. Y., JR.

HYPODERMIC USE OF MORPHIA IN OPERATIVE MIDWIFERY. Dr. Melvin Rhorer, Assistant Demonstrator of Anatomy in the University of Louisville, and now in Vienna pursuing his studies, sends the following: "I have in a number of instances seen turning effected long after the liquor amnii had passed by fully narcotizing the patient. I have never, however, seen the uterus brought to that desirable state of rest whereby the operation may be easily performed when the usual means of producing narcotism have been employed; that is, by chloroform or the internal exhibition of opium. I believe the sovereign remedy in such cases is the hypodermic injection of morphia. I have witnessed its good effects in a large number of cases, one of which, witnessed at the clinique of Professor Braun, I here report. The patient was a strong, healthy woman, thirty years of age, the mother of three children, at whose birth she had had no trouble. Her condition on examination was as follows: the abdomen tense and somewhat

sensitive to touch; the liquor amnii had passed seven hours previously. Her pains were recurring at short invervals; great sensibility on vaginal examination. An arm, purple and much swollen, was found in the vagina, with the corresponding shoulder deeply wedged in the pelvic cavity; the surrounding parts of a higher temperature; the patient much exhausted from pain. One sixth of a grain of morphia was injected into the linea alba, midway between the umbilicus and symphisis pubis. In five minutes the hitherto spasmodic action of the uterus was much more feeble, the intervals became longer, etc., and in twenty minutes complete rest was secured. The uterus was soft, and the shoulder movable in the pelvic cavity. Turning was easily and quickly effected, and the child was extracted without causing contractions. By continued gentle friction on the abdomen, the uterus was again excited to activity, and in half an hour the placenta came away. Very soon afterward the womb had contracted under the symphisis, and the patient continued to do well."

American Medical Association.—We insert the following from Dr. Wm. B. Atkinson, of Philadelphia, Permanent Secretary of the American Medical Association: "I propose to issue a pamphlet edition of the minutes of our late session of the American Medical Association, at twenty-five cents a copy. As the volume of transactions can not be ready before October, this will be the only *official* record of the proceedings until that appears."

DR. GEORGE C. BLACKMAN.

DR. GEORGE C. BLACKMAN, Professor of Surgery in the Medical College of Ohio, died at ten o'clock on Wednesday night, the 19th of July.

The death of this eminent man demands more than a passing notice in the American Practitioner. His great abilities, achievements, and fame deserve distinct recognition. He was really one of the founders of this journal; for it will be remembered that the American Practitioner is the lineal descendant of the Cincinnati Journal of Medicine, of which the deceased was one of the editors. He was a warm friend and valued contributor to the Practitioner, and had his life been spared his writings would have continued to enrich its pages. Finally, we were united to him by a friendship whose bonds only death could divide. In the case of one of us the friendship ran back nearly a quarter of a century, when we were fellow-students in Paris; in the other it was of shorter duration indeed, but during five of its more than half score years we were colleagues in the Faculty of the Medical College of Ohio, and during eighteen months were associates in editing the Cincinnati Journal of Medicine. We are sure too that our readers, many of whom were friends, acquaintances, or pupils of Dr. Blackman, will regard with some interest even the hurried and imperfect sketch which the brief time and the few materials at hand permit us to make of his life and services.

George Curtis Blackman, the second son of Judge Thomas Blackman, was born at Newtown, Connecticut, April 21, 1819. His preparatory education was at Newtown and Bridgeport,

and then at Newburg, New York; this education completed, he entered Yale College. He graduated in medicine at the College of Physicians and Surgeons, New York, March 1, 1840. From his graduation until 1855 he was engaged in practice in New York City and in Newburg, as surgeon of an Atlantic packet-ship—in this capacity crossing the ocean sixteen times—and in professional study in Great Britain and in France, the greater part of his residence abroad being spent in London. Upon his first visit to London he had but seventy-five dollars, and on this he managed to live some months—taking cheap lodgings, studying covered with bed-clothes to avoid the expense of a fire, and by the dim light of a tallow-candle; two penny-rolls a day constituted his food-allowance. After a time he made the acquaintance of some of the hospital surgeons, among others that of Sir William Fergusson, who inquired at the close of the first interview where he was lodging. A short time after he received a note from Sir William inviting him to dinner. He was fortunate enough to borrow some clothes, his own being too much out of repair, and dressed in them made his way to the house of his host, where he was quite abashed at being presented by his host to some of the great surgeons of the day, such as Liston and Cooper, as a young American friend of whom he had spoken to them.

Another London surgeon equally prompt to recognize Dr. Blackman's merits was Mr. Pollock, of St. George's Hospital. The writer well remembers, when in London in 1864, how highly both Sir William Fergusson and Mr. Pollock spoke of Dr. Blackman, especially referring to his ability and to his wonderful industry.

In 1855 he was elected to the Chair of Surgery in the Medical College of Ohio. Prior to this he had edited the last edition of *Mott's Velpeau*, and translated, with annotations, *Vidal on Venereal Diseases*. Almost from his entrance into the profession he was a contributor to medical journals.

In 1847 he was elected a Fellow of the Medical and Chirurgical Society of London, an honor which at that time, and for some years subsequently, we believe, no other American had received.

He came West not only highly indorsed by such men as Parker and Gross, but strongly urged to come. Prof. Gross, for example, wrote, telling him that "an empire in surgery was awaiting" him. He came, took possession of the empire, and proved his imperial power.

Turning now from this brief and otherwise imperfect narrative, we shall next speak of him as a surgeon, teacher, and man. Dr. Blackman excelled in surgical diagnosis, and this excellence was manifest, not so much in the rapidity with which his opinions were formed as in their correctness. As an operator he deserves to be ranked among the foremost of this or of any country. His taste for surgery and his ability in operating were manifested while he was a medical student, for then he performed tenotomy successfully in at least two or three cases, his first tenotomy knife being fashioned from a scalpel by a "village blacksmith." Some cases of this operation were reported by him in the New York Lancet for 1842. The chief qualities manifest in his operations were boldness, rapidity, safety. In the performance of any great operation his whole nature seemed absorbed; a fiery enthusiasm, a mighty passion pervaded and possessed his entire being. He shrunk from no peril, was ready for any emergency, intensely alive to all pertaining to the welfare and safety of his patient, and utterly oblivious of everything else. He has been sometimes criticised for the needless and for the hopeless performance of operations. We doubt the complete justice of this criticism; only exceptionally and in rarest exceptions could it be true; and might not these exceptions be attributed to errors of judgment rather than to a passion for operating? Besides, it is very easy after a case has terminated fatally to say that the surgeon should not have operated, it

was hopeless; or he should not have operated, the operation caused death; but where is the proof? Or what would have been said had the patient recovered?

A criticism of more justice is that he sometimes, oftentimes it may be, neglected the treatment of patients subsequent to operating on them: and this may have been frequently a serious detriment to them, and certainly was a damage to his reputation.

In regard of Dr. Blackman's ability in *didactic teaching* opinions differed. His colleague, Dr. Wright, excellent in qualification and with excellent opportunities for judging, regarded him as peculiarly well fitted for this work: but he never made Dr. Blackman believe it! Undoubtedly the students sometimes thought his lectures above their level, and better suited for mature than embryonic doctors. It should be remembered too that he did not, as some others do not, regard lecturing the best means for imparting knowledge; he would have had the students drilled in text-books, and given very little time to oral instruction. A college lecture was generally with him a labor not of love, but of hate, while he threw his whole soul into hospital teaching. It was really painfully amusing to hear him recount his first attempts at lecturing in the Medical College of Ohio; he was so utterly disheartened that he was on the point of resigning his chair and returning East, a step which was prevented by the better counsels of Professor Armor, his colleague, and some other friends. But never did he conquer his dislike of didactic lectures. He was always glad to find some one who would take his "hour;" and even when there was no substitute he sometimes failed to make his appearance. Nevertheless, when driven to it, he lectured most admirably; but he was an iconoclast among theories, trampling them down as remorselessly as an elephant the reeds in an Indian jungle; he was chary in discussing the so-called *principles* of surgery, but clear and full in the *rules* and rich in the *cases* of surgery. His ability

as a *clinical* teacher no one questioned. His personal appearance was impressive; he had a full, clear voice; he was an impassioned speaker; and those who crowded the operating-room of the Commercial Hospital were not the students from one college, but from several, and a goodly number of the profession, to listen to his words, and to see his works; and it remains as true now as in the days of Quintilian—"*orator eloquens non potest sine multitudine audiente.*" He had a wonderful power in seizing upon the points of a case and presenting them strongly and forcibly; and he had such an extensive acquaintance with surgical literature that illustrative or analogous cases seemed to come as freely from his lips as the water gushed from the smitten rock. Nor was he a man merely of professional knowledge; he had no little strength and beauty imparted to his utterances, derived from his reading of philosophy and general literature. Behind all this was that bold self-reliance, the consciousness of power; he knew what he could do, and he knew that he would do it in the operations before him. No wonder that students listened to every word, and looked at every motion of finger or knife with intense interest. His attainments in surgical literature were vast. Probably he had no superior on this continent in extent and variety of knowledge in this department. Several years ago, before Dr. Blackman came West, the late Dr. Mussey, at a party of eminent professional men in the City of New York, happening to ask a distinguished fellow-surgeon the date and other particulars of the first performance of a particular operation, was answered, "I don't know; but I will introduce you to a man who does know—Dr. Blackman—he is a walking encyclopedia." Dr. Blackman was found, and the desired information obtained. He had a passion for books—giving his last dollar, or stretching his credit to the utmost for some new or old and rare surgical work—and it was not possession he sought so much as knowledge; certainly too he acquired this knowledge with wonder-

ful facility. Place him in contact with a book, and he took up its contents so rapidly it seemed almost like the imbibition of water by a sponge. At his death he possessed one of the finest private surgical libraries in the United States, which will no doubt be retained by the profession of Cincinnati in their city.

Dr. Blackman's contributions to periodical professional literature have been many and valuable, more numerous perhaps than those of any other surgeon in this country.

In preparing an article for publication, he did not find it necessary to rewrite; the first copy—sometimes with not a few interlineations and on odd scraps of paper, part written perhaps with pencil and part with pen, as if prepared at various intervals—went to the printer. He wrote clearly, concisely, and in unimpeachable English. He was a good Latin and Greek scholar, was at home in French, and had a little knowledge of German.

It may be truly said of Dr. Blackman that he was a generous host, genial companion, and devoted friend; in social intercourse, when in good condition, he was one of the most delightful of conversationists—it was really a treat to listen to him—he had mingled so much in the world, had traveled so extensively, had met with so many varied experiences, some of them of a most ludicrous sort, others of startling peril, and he had such fluency of speech and such fine descriptive powers, that minutes and hours would glide away while he talked.

He was a man of deep feelings and profound sympathy; beneath that stern and austere exterior there throbbed a warm heart. He could not witness without indignant remonstrance needless suffering inflicted upon inferior animals—he would stop in the street to arrest a teamster for mal-treatment of his horse; he would resign his professorship rather than remain in a college where one of his colleagues, many years ago, was making vivisections. He would empty his pockets to relieve

a professional brother who was in pecuniary distress. Had he been worth a million he soon would have impoverished himself not only or chiefly in satisfying his own desires and wants, but in giving to the needy. When sickness visited his own household, his own offspring, and death followed fast, no man could have manifested more tenderness of feeling.

Did he ever seem exorbitant in a charge—importunate in securing it? He had been defrauded time and again until he learned to distrust promises; and besides, when persons seek the highest skill, they ought to be ready and willing to pay roundly for it. Those only who were intimate with him knew how many and how heavy drains, outside of his own or of his family's expenses, there were upon him, and they honor him for his noble generosity in meeting those demands; then too, debts—those evil spirits that haunt the sleep, disturb the digestion, ruffle the temper, and darken the hopes of a truly sensitive soul—were his inseparable companions; "a youth of labor" had not secured for him in this regard "an old age of ease."

It is not wonderful that a man possessing Dr. Blackman's intensity of feeling should at times manifest passion, hasty, violent, and unjust; he was so quick to feel, so impulsive in word or deed, as to bid defiance to proper self-control. This man, with such admirable qualities as a surgeon, who could read so accurately the intricacies of a surgical case, and reason and act so well upon the knowledge, was often a bad reasoner as to men, and sadly blundered in the interpretation of human conduct. In a suspicious frame of mind, trifles light as air became proofs of evil deeds or of sinister intentions, while in truth the suspected parties had never so much as dreamed of either. Yet, let it be said, he was an open and fearless foe; there was no concealment of his feelings, no strategy in his movements; and, better still, let it be said that, once convinced of an error or of an injustice, no man was more prompt and noble in acknowledgment and apology—he would act

justly under such circumstances to his bitterest and most unscrupulous foe.

Let it be remembered too that these violent manifestations of an impulsive nature might at times be attributed to the state of his health. Early in his professional career he had been regarded by distinguished authorities, both in this country and abroad, as doomed to death by pulmonary tuberculosis. Struggling to escape Scylla, Charybdis threatened him; for years past, irregular and capricious appetite, indigestion in various forms, severe pains and exhaustion, were frequent visitants if not almost constant companions; and amiability and gentleness are sometimes more dependent upon the condition of the stomach and liver than moralists might think.

In the business relations of life Dr. Blackman's character was irreproachable. No one could be acquainted with him without knowing that he was frank and truthful. He concealed neither friendship nor hate. Fault may have been found with him on the ground of his being arbitrary and self-willed, but such faults are not unusual in self-made men.

This sketch might be prolonged and still but partial justice be done to his great character—a character having some defects and imperfections, but with all these exhibiting a strength and nobleness which were a glory to our common nature.

Much as Dr. Blackman has contributed to American surgery, it is to be regretted that he was not spared to prepare a work on clinical surgery, for which his experience specially qualified him.

Dr. Blackman was confined to his house, and even to his room, for some weeks before his death. His disease was cirrhosis and consequent ascites. On the Monday before his decease he was received into the Presbyterian Church. This step, which was determined upon much earlier in his illness, had been postponed with the vain hope that he would

be able to be out again, and make his profession of Christian faith in public. His funeral took place on Friday, the 21st, and was attended by a large concourse of the medical profession and citizens. Among the most interesting and impressive of the exercises was an address by Prof. M. B. Wright, for a long time friend and colleague of Dr. Blackman, in which the character of the deceased was most faithfully and affectionately depicted.

Dr. Blackman's death-bed message to his friends and medical students was in words which we give. Would that its echo might be repeated and prolonged until it fell on every ear and was fixed in every heart! It was as follows: "Tell them for me and from me, do not postpone becoming religious as long as I have done. Tell them, urge them, to seek religion and embrace the Gospel, and seek preparation for death; and tell them how happy I am since I have made my peace with my Maker."

This struggling life, wearily buffetting the waves of adverse circumstances, now rising on their summits in heroic achievements, revealing the god-like in his nature, and then again half-sinking, half-despairing, with moanings that were pitiable, at last rests quietly on the great ocean of eternity.

In the night, in the darkness, this great soul, leaving a body that had been convulsed by agony and shattered by pain, ascended its star-lit way to a home beyond the stars—a home of joy and peace.

Lightly may the clods of the valley rest upon his mortal remains! Let his faults be forgotten, his virtues emulated, his fame exalted, while in earth's long future it shall be

> "That honor comes, a pilgrim gray,
> To bless the turf that wraps his clay."

T. P.

INDIANAPOLIS, IND.

TO THE MEDICAL PROFESSION.

Dr. George C. Blackman, after winning eminent fame, contributing largely to the glory of American surgery and to professional advancement, died poor. He left a wife and children without adequate provision for their support. Will you not, in memory of his great abilities and distinguished services—not in the spirit of mere charity, but of generous justice—see that those nearest and dearest to him receive that adequate provision? We suggest therefore a *Blackman Testimonial Fund;* and that contributions for this purpose be forwarded to Drs. M. B. Wright, E. B. Stevens, and W. W. Dawson, of Cincinnati; the names of donors and amounts given to be published from time to time in the medical journals, and the sum received to be invested in the manner which will be most useful to the widow and children of the deceased.